

4. SYSTEM OBSERVATIONS

The systemwide statistics for the county arterials and freeways are shown in Table 6. Based on an average of all CMP roads in the County, the overall average speeds on the freeway system decreased on freeways by 1.35 miles per hour and increased on arterials by 1.05 miles per hour during the p.m. peak period. The a.m. peak period experienced an improvement of about 4.5 miles per hour since 2002.


Table 6
Average Vehicle Speeds in Peak Hours
on Alameda County CMP Roadways

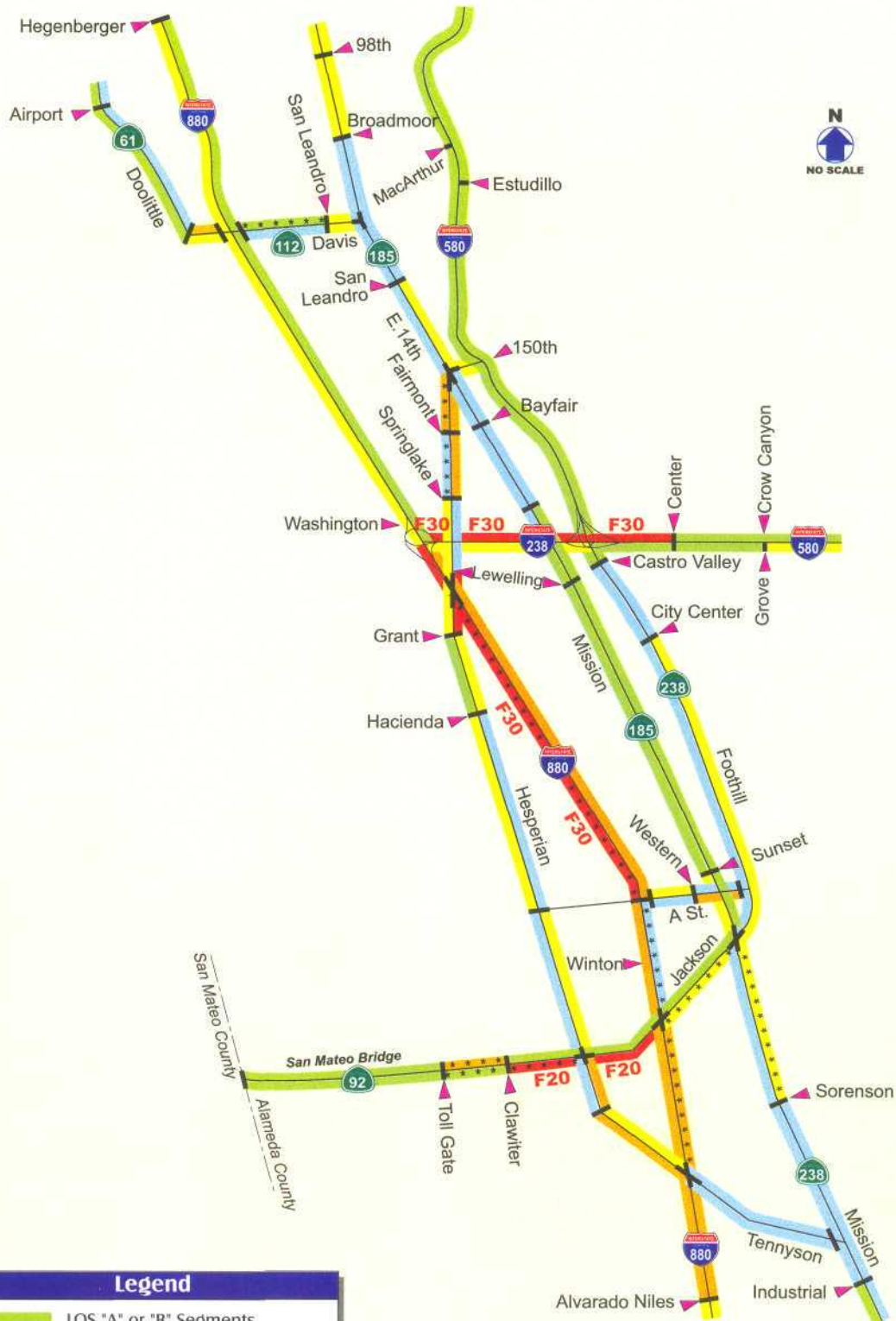
	2002 Results	2004 Results
Freeways P.M.	51.21 mph	49.86 mph
Arterials P.M.	23.27 mph	24.32 mph
Freeways A.M.	42.03 mph	46.51 mph

Figures 4 through 7 show the results of the P.M. peak travel time runs and the resulting LOS for each of the segments on the CMP designated system by roadway and by jurisdiction. These figures each portray a sub area of the County which generally corresponds to the County planning areas. (See Appendix tables on pages A-1 through A-14 for a full listing of all results).



Legend	
	LOS "A" or "B" Segments
	LOS "C" Segments
	LOS "D" Segments
	LOS "E" Segments
	LOS "F" Segments
F30	Average Speed < 30 ≥ 20mph
*****	This segment was previously identified as LOS "F" in 1991 when the CMP was first adopted.

 <p>Alameda County CMP 2004 LOS Monitoring Study</p>	<p>2004 PM Peak Level of Service Results Planning Area 1</p>	Figure
		4



Legend	
	LOS "A" or "B" Segments
	LOS "C" Segments
	LOS "D" Segments
	LOS "E" Segments
	LOS "F" Segments
F30	Average Speed < 30 ≥ 20mph
F20	Average Speed < 20 ≥ 10mph
*****	This segment was previously identified as LOS "F" in 1991 when the CMP was first adopted.

Alameda County CMP
2004 LOS Monitoring Study

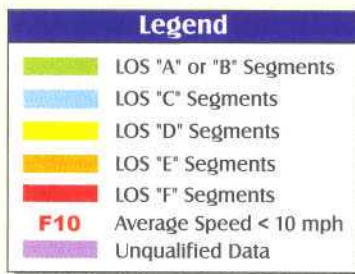
**2004 PM Peak
Level of Service Results
Planning Area 2**


Figure

5



	Alameda County CMP 2004 LOS Monitoring Study	Figure 6
2004 PM Peak Level of Service Results Planning Area 3		



 <p>Alameda County CMP 2004 LOS Monitoring Study</p>	<p>2004 PM Peak Level of Service Results Planning Area 4</p>	<p>Figure 7</p>
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COMPARISONS TO PREVIOUS STUDIES

The 2004 P.M. peak period travel time and speed survey results were compared to the survey results from 1991 to 2002 on the major routes on the Alameda County CMP system. Table 7 shows these results for freeway corridors, while Table 8 lists the major arterial corridors. For each route, the segments have been aggregated to show the entire length of the route throughout Alameda County.

Freeways. Average speeds in three freeway corridors decreased notably in 2004 compared to previous years. They are:

I-580 southbound from I-80/I-580 to I-238: This almost 16 mile corridor operated at LOS B (54.7 mph) in 2002. The 2004 surveys showed average speeds dropping to 42.8 mph, LOS D a change of 22 percent. The congestion in the corridor is primarily between Harrison and SR 13 in Oakland.

I-680 northbound from Scott Creek to Alcosta: This corridor is 21 miles long and experienced average speeds of 51.4 mph in 2002 with a service level C. In 2004, the average speeds have dropped almost 10 mph or 19 percent to 41.8 mph with a corridor wide level of service D.

SR 13 northbound between Mountain and Hiller: Average speeds on this 5 mile stretch of roadway have dropped from 50.4 mph (LOS C) in 2002 to 34.6 mph (LOS E) in 2004. This represents a 31 percent change.

Conversely, average speeds in three corridors increased. These corridors are:

I-80 eastbound from the Toll Plaza to Central: Average speeds in this 6 mile corridor have improved from 19.3 mph in 2002 to 31.6 mph in 2004, an increase in LOS from F to E.

I-880 northbound from Dixon Landing to I-980: This corridor is 31 miles long and experienced average speeds of 37.5 (LOS E) in 2002. The average speeds in the corridor have increased 31 percent to 49.1 (LOS C) in 2004.

SR 24 eastbound from I-580 to Fish Ranch: A little less than 5 miles long, this corridor was operating at LOS F in 2002 with an average speed of 21.4 mph. The corridor is operating at LOS E in 2004 with an increase in average speed of 86 percent to 39.9 mph.

Arterials. Average speeds increased or stayed the same on twenty-two (22) arterial routes and decreased on 2 arterial routes between 2002 and 2004. The most significant improvements in travel time occurred in Livermore on SR 84 where the new Isabel Parkway and the realignment of SR 84 has been completed. Average speeds in this corridor have increased over 65 percent and travel time has been cut in half. The other notable decrease is on Decoto Road between the County Line and SR 238 where average speeds have dropped from 36.8 mph (LOS A) in 2002 to 29.5 mph (LOS B) in 2004. Other arterial corridors continue to experience congestion and poor levels of service, but there have been no notable changes since the 2002 surveys.

Table 7
Comparison of P.M. Peak Hour Travel Time Data & Speed on Selected Freeway Routes (1991-2004)

CMP Route	Dir	From	To	Length (miles)	1991	1992	1994	1996	1998	2000	2002	2004
I-80	EB	Tollgate	Central	6.35	15:56 23.5	18:24 20.4	17:19 21.7	18:23 20.8	18:50 20.2	14:18 26.6	19:45 19.3	12:03 31.6
	WB	Central	Tollgate	6.11	14:27 25.3	15:26 23.7	15:41 23.3	14:53 24.6	13:07 28.0	20:52 17.6	16:33 22.2	13:10 27.8
I-580	EB	SR 238/ Foothill	I-205	30.33	32:55 56.3	33:40 55.0	33:37 55.1	33:04 55.0	n/a n/a	49:25 40.5	59:43 30.5	53:22 34.1
	WB	I-205	SR 238/ Foothill	30.15	32:10 57.2	33:05 55.6	32:07 55.1	29:30 55.0	n/a n/a	33:09 55.0	33:10 54.5	30:02 60.2
I-580	SB	I-80/I-580 Split	I-238	15.88	18:18 52.6	18:35 51.8	21:53 44.0	18:13 53.2	16:16 60.0	15:21 62.7	17:45 54.7	22:15 42.8
	NB	I-238	I-80	14.73	16:11 57.7	16:50 55.5	18:20 51.0	15:36 52.2	14:58 61.2	14:36 62.8	15:25 59.5	15:37 56.6
I-680	NB	Scott Creek	Alcosta (On)	21.13	21:59 58.1	22:31 56.7	22:31 56.7	24:16 52.2	25:07 50.5	21:54 58.2	24:39 51.4	30:21 41.8
	SB	Alcosta (On)	Scott Creek	21.30	21:45 59.0	22:05 58.1	23:23 54.9	21:04 60.6	19:06 66.8	20:13 63.2	20:44 61.6	19:27 65.7
I-880	NB	Dixon Landing	I-980	31.41	40:49 44.8	41:15 44.4	42:37 42.9	50:26 45.5	49:21 38.8	41:26 47.5	50:20 37.5	38:23 49.1
	SB	I-980	Dixon Landing	30.85	41:55 43.0	44:41 40.4	47:36 37.9	40:31 45.8	37:19 49.7	40:48 49.1	45:46 40.5	47:57 38.6
SR 13	NB	Mountain	Hillier	5.43	6:12 53.6	6:40 49.9	6:51 48.5	6:45 48.1	6:06 53.2	6:24 50.9	6:27 50.4	9:25 34.6
	SB	Hillier	Jct. I-580	5.45	6:04 56.4	5:46 59.4	6:31 52.5	6:55 47.2	5:31 59.1	5:59 59.5	5:58 54.6	6:03 54.1
SR 24	EB	I-580 (On)	Fish Ranch	4.52	9:19 30.1	9:35 29.2	9:25 29.8	11:10 24.3	6:59 38.9	8:08 33.4	12:41 21.4	6:48 39.9
	WB	Fish Ranch	I-580 (Off)	4.47	5:00 54	4:58 58	5:01 54	5:24 50	4:30 60	4:41 57	4:26 60.5	4:34 58.7

Table 8

Comparison of P.M. Peak Hour Travel Time Data & Speed on Selected Arterial Routes (1991-2004)

CMP Route	Direction	From	To	Length (miles)	1991	1992	1994	1996	1998	2000	2002	2004
Hesperian	NB	Tennyson	14th St.	5.50	19:35 17.2	19:19 17.5	18:40 18.1	16:06 20.5	17:18 19.5	18:10 17.3	22:00 15.3	22:10 14.9
	SB	14th St.	Tennyson	5.60	17:20 19.4	16:05 20.9	17:38 19.1	16:10 20.7	16:13 20.7	16:41 19.5	17:24 19.3	17:33 19.1
SR 13 Ashby	EB	I-80	Hiller	3.77	15:17 14.7	13:19 16.9	13:40 16.5	13:40 16.5	14:26 15.6	16:57 13.4	15:04 15.0	16:47 13.5
	WB	Hiller	I-80	3.80	14:13 16.0	13:09 17.2	13:49 16.4	15:09 15.0	14:06 16.1	14:22 15.9	16:36 13.8	15:27 14.7
SR 61	SB	Atlantic	Davis	7.57	18:40 24.9	18:07 25.0	18:30 24.5	19:36 23.1	19:01 23.9	17:41 29.4	19:47 23.0	20:59 21.6
	NB	Davis	Atlantic	7.57	19:32 24.3	18:38 25.5	18:41 25.5	18:58 24.1	19:24 23.4	19:17 25.6	18:49 24.1	20:20 22.3
SR 84 Fremont	WB	SR-238	I-880 SB	4.30	10:07 25.0	8:27 30.5	10:56 23.5	10:27 24.1	11:42 22.0	10:23 24.9	11:33 22.3	9:48 26.3
	EB	I-880 SB	SR-238	4.30	11:21 24.3	10:24 24.8	11:45 21.9	11:38 18.7	12:56 19.9	14:31 16.6	11:58 21.5	10:43 24.1
SR 84 Livermore	SB	I-580 WB	Concannon	*3.53 (4.14)	9:20 32.4	10:36 28.5	9:27 32.0	11:03 27.4	11:01 27.5	10:20 10.2	10:45 23.1	5:30 38.5
	EB	Concannon	I-580 WB	*3.53 (4.14)	11:32 26.2	10:32 28.7	10:23 29.1	10:46 28.1	11:12 27.0	11:57 22.6	11:25 21.8	5:46 36.8
SR 123	SB	Carlson	35th St.	5.45	16:26 19.0	16:32 19.7	14:22 22.7	18:09 18.0	18:15 17.9	18:48 17.4	17:22 18.8	17:38 18.5
	NB	35th St.	Carlson	5.46	16:56 20.1	15:32 21.1	18:12 18.0	17:42 18.5	26:00 12.6	18:36 17.6	22:39 14.4	19:56 16.4

Table 8 (Continued)
Comparison of P.M. Peak Hour Travel Time Data & Speed on Selected Arterial Routes
Alameda County CMP System (1991-2004)

CMP Route	Direction	From	To	Length (miles)	1991	1992	1994	1996	1998	2000	2002	2004
SR 185	SB	42nd St.	SR 92/238	10.46	42:55 14.1	28:47 21.8	n/a n/a	30:31 20.6	29:12 21.5	32:11 19.3	30:56 20.3	33:25 18.8
	NB	SR 92/238	42nd St.	10.31	38:34 18.6	28:54 21.7	n/a n/a	28:40 21.8	31:02 20.2	29:34 21.3	29:36 21.2	34:36 17.9
SR 238 Mission	NB	I-680 NB	Jackson	12.39	24:05 30.7	n/a n/a	27:30 26.9	27:10 27.3	27:04 27.4	26:37 29.2	30:05 24.6	30:30 24.4
	SB	Jackson	I-680 NB	12.36	24:28 30.3	n/a n/a	28:15 26.2	26:45 27.7	27:20 27.1	24:26 31.0	26:13 28.2	28:27 26.1
MLK/Shattuc k Ave	NB	SR 24	University	2.78	7:02 17.5	6:43 18.3	6:07 20.1	12:01 13.7	11:41 14.3	11:16 14.8	11:54 14.0	11:47 14.2
	SB	University	SR 24	2.76	10:07 16.4	9:12 18.0	9:59 16.6	10:26 15.7	10:45 15.4	12:01 13.8	12:45 13.0	10:50 15.3
University Ave	EB	I-80 Off	Shattuck Pl	2.05	7:02 17.5	6:43 18.3	6:07 20.1	7:07 17.2	7:21 16.7	8:05 15.2	7:36 16.2	7:43 15.9
	WB	Shattuck Pl.	I-80 Off	2.05	6:38 18.5	6:30 18.9	7:07 17.3	7:27 16.5	9:51 12.5	7:45 15.9	7:01 17.5	8:23 14.7
Decoto Road	WB	Hwy 238	County Line	8.97	11:46 45.7	12:43 42.3	13:56 38.6	16:30 32.6	13:58 38.5	14:54 37.3	17:25 30.9	16:12 33.2
	EB	County Line	Hwy 238	8.36	12:41 42.3	14:01 28.3	14:40 36.6	17:49 30.0	17:06 31.4	15:50 34.9	14:35 36.8	17:01 29.5
SR 84 Niles Canyon	EB	SR 238	Concannon	*15.07 (15.35)	n/a n/a	n/a n/a	25:20 36.4	25:17 34.3	n/a n/a	29:20 31.4	38:08 24.2	37:02 24.4
	WB	Concannon	SR 238	*16.78 (15.01)	n/a n/a	n/a n/a	20:37 43.7	25:58 41.4	n/a n/a	19:56 45.8	22:41 39.7	24:42 40.8

Segments with Notable Changes in the Last Two Years

Table 9 shows those roadways and segments for which the 2004 P.M. peak period surveys reported significant changes in the travel time results as compared to previous surveys. Routes are listed that have seen a change of two or more Level of Service grades between 2002 and 2004.

Many of the improved travel time segments are related to the completion of construction activities between 2002 and 2004. Others appear to be related to specific intersection or spot improvements that have been made during this time period. On the arterial routes, as well as the freeways, it is sometimes difficult to pinpoint the reason for specific changes. For arterials, changes could be related to signal timing modifications.

Table 9
Segments with Significant Changes from Previous Year
P.M. Peak Period

CMP Route	Segment	Change in Speed Data	Comments
Segments with Decrease in Speed Resulting in Level of Service Change of 2 or More Grades			
I-80 WB	Toll Plaza to SF County Line	Decrease from 51 to 28 mph.	Continuing construction activities and lack of roadway capacity.
I-580 EB	Grove to I-680	Decrease from 56 to 48 mph.	
I-580 EB	Harrison to SR 13	Decrease from 48 to 30 mph.	
I-580 NB	Harrison to SR 24	Decrease from 63 to 50 mph.	
I-680 NB	SR 238 to SR 84	Decrease from 50 to 31 mph.	Increasing commute volumes.
I-880 SB	I-980 to 23 rd	Decrease from 43 to 20 mph.	
SR 13 NB	Joaquin Miller/Lincoln to Moraga	Decrease from 58 to 35 mph.	
SR 13 NB	Moraga to Hiller	Decrease from 45 to 22 mph.	
SR 13 SB	Joaquin Miller/Lincoln to I-580	Decrease from 61 to 34 mph.	
SR 84 EB	Toll Gate to Thornton	Decrease from 49 to 30 mph.	
SR 84 EB	Thornton to I-880	Decrease from 50 to 30 mph.	
SR 92 WB	Clawiter to Toll Gate	Decrease from 52 to 40 mph.	
Hegenberger WB	Baldwin to Edgewater	Decrease from 23 to 17 mph.	Changes in signal timing, increased traffic at Oakland Airport.
Hesperian NB	Fairmont to 14 th	Decrease from 20 to 13 mph.	
Hesperian SB	14 th to Fairmont	Decrease from 19 to 12 mph.	
Mowry EB	I-880 to Farwell	Decrease from 26 to 17 mph.	
Park/23 rd EB	Kennedy to 11 th	Decrease from 25 to 15 mph.	
Park/23 rd WB	Santa Clara to Encinal	Decrease from 16 to 8 mph.	
University WB	San Pablo to 6 th	Decrease from 22 to 11 mph.	Construction in the median and land closures.
SR 13 Ashby EB	Shattuck to Telegraph	Decrease from 25 to 16 mph.	

Table 9 (Continued)
Segments with Significant Changes from Previous Year
P.M. Peak Period

CMP Route	Segment	Change in Speed Data	Comments
Segments with Decrease in Speed Resulting in Level of Service Change of 2 or More Grades			
SR 13 Ashby EB	College to Domingo	Decrease from 11 to 6 mph.	
SR 61 (Doolittle) SB	Harbor Bay to Airport	Decrease from 43 to 25 mph.	Changes in signal timings and increased traffic due to area growth.
SR 61 NB	Harbor Bay to High/Otis	Decrease from 37 to 25 mph.	Changes in signal timings and increased traffic due to area growth.
SR 77 (42 nd) EB	I-880 to E. 14th	Decrease from 22 to 10 mph.	
SR 112 (Davis) EB	Doolittle to I-880	Decrease from 37 to 18 mph.	
SR 123 San Pablo S	Allston to Ashby	Decrease from 25 to 17 mph.	
SR 123 San Pablo NB	Stanford to Ashby	Decrease from 26 to 15 mph.	
SR 185 (14 th) SB	98 th to Broadmoor	Decrease from 25 to 18 mph.	
SR 185 (Hayward) SB	Sunset to SR 92/238	Decrease from 24 to 13 mph.	
SR 185 (14 th) NB	170 th to Bayfair	Decrease from 32 to 22	
SR 185 (14 th) NB	Hesperian to San Leandro Blvd.	Decrease from 30 to 17 mph.	
SR 238 (Foothill) SB	Castro Valley Blvd. To City Center	Decrease from 33 to 24 mph.	

Table 9 (Continued)
Segments with Significant Changes from Previous Year
P.M. Peak Period

CMP Route	Segment	Change in Speed Data	Comments
<i>Segments with Increase in Speed Resulting in Level of Service Change of 2 or More Grades</i>			
I-80 EB	Toll Gate to I-580 Merge	Increase from 14 to 43 mph.	
I-80 EB	University to Central	Increase from 28 to 44 mph.	
I-238 EB	I-880 to I-580	Increase from 28 to 47 mph.	
I-580 WB	SR 84/1 st to Portola	Increase from 49 to 66 mph.	
I-580 NB	Foothill to SR 13	Increase from 52 to 63 mph.	
I-580 WB	I-80 to Central	Increase from 42 to 67 mph.	
I-880 NB	Stevenson to Decoto	Increase from 43 to 57 mph.	
I-880 NB	Decoto to Alvarado-Niles	Increase from 24 to 43 mph.	
SR 13 NB	Mountain to Joaquin Miller	Increase from 54 to 62 mph.	
SR 92 EB	San Clara County Line To Toll Gate	Increase from 25 to 66 mph.	Roadway improvements.
SR 92 EB	Toll Gate to Clawiter	Increase from 22 to 60 mph.	Roadway improvements
SR 92 WB	I-880 to Clawiter	Increase from 52 to 63 mph.	
SR 92 WB	Toll Gate to County Line	Increase from 48 to 62 mph.	
Hegenberger EB	Edgewater to Baldwin	Increase from 15 to 28 mph.	
Hesperian SB	SR 92 to Tennyson	Increase from 15 to 23 mph.	
SR 61 (Doolittle) NB	Davis to Airport	Increase from 16 to 22 mph.	
SR 77 (42 nd) WB	E. 14 th to I-880	Increase from 17 to 32 mph.	
SR 84/Peralta (Fremont) EB	Mowry to Fremont	Increase from 21 to 32 mph.	
SR 112 (Davis) EB	I-880 to San Leandro	Increase from 12 to 22 mph.	
SR 123 San Pablo SB	Carlson to Washington	Increase from 19 to 31 mph.	
SR 185 (14 th) SB	170 th to Llewelling	Increase from 20 to 35 mph.	